

[Designation of Document] Abstract

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There is provided a wide-band amplifier having a flat amplification characteristic over a wide frequency bandwidth, being prevented from degrading due to parasitic capacitance, and being short in group delay time.

The wide-band amplifier includes a band-pass filter made of an LC parallel resonant circuit and an LCR series resonant circuit and provided in parallel as a load for a current output amplifier device. The band-pass filter has a plurality of poles as well as zeros provided therebetween in the s-plane, thereby improving a characteristic flatness in a passband. The output terminal of the amplifier device serves as an output terminal for the amplifier, so that the problem of group delay does not occur. A capacitance element between the output terminal of the amplifier and GND absorbs parasitic capacitance as part of constants, thereby preventing degradation of the frequency characteristic.